REMARKS/ARGUMENTS

The Examiner found that claims 6-9, 18-20, 28-31 would be allowed if rewritten in independent form including the requirements of the base and intervening claims. Applicants have amended claims 6, 18, and 28 to place these claims and the claims 7-9, 19, 20, and 29-31 that depend therefrom in condition for allowance.

1.   Claims 1, 4, 5, 10-17, 21-23, 26, 27, and 32-36 are Patentable Over the Cited Art

The Examiner rejected claims 1, 4, 5, 10-17, 21-23, 26, 27, and 32-36 as obvious (35 U.S.C. §103) over Brown (U.S. Patent No. 6,385,686) in view of Khan (U.S. Patent No. 6,625,683).

Amended independent claims 1, 15, and 23 are directed processing operations in a system including a bus, a target device and devices capable of accessing the target device over the bus, and require that the target device performs: receiving a write request from one of the devices over the bus; determining whether a delayed read request is pending after receiving the write request; issuing a command to disconnect the device initiating the write request from the bus in response to determining that the delayed read request is pending; and allowing the device initiating the write request to reconnect to the bus and complete the write request after the delayed read request is completed.

Applicants amended these claims to recite that the "transaction request" comprises a "write request". This requirement is disclosed on page 6 of the Specification.

On April 13, 2005, the attorney for Applicants and the Examiner held a phone interview to discuss the above amendment to the independent claims. The Examiner indicated that such amendment appears to distinguish over the cited art and would reconsider the rejection in view of such amendment. Applicants submit that the amended claims distinguish over the cited art for the reason discussed below.

The Examiner cited col. 10, lines 3-50 of Khan as teaching the pre-amendment claim requirement of determining whether a delayed read request is pending after receiving the transaction request. (Second Office Action, pg. 3) Applicants submit that the cited Khan does not disclose the added claim requirement of determining whether a delayed read request is pending after receiving the write request and issuing a command to disconnect the device

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initiating the write request from the bus in response to determining that the delayed read request is pending.

The cited col. 10 discusses retrying a read transaction after prefetching the requested data and that if there is already a previously delayed transaction pending, the current transaction will not be latched. Nowhere does the cited col. 10 disclose that a determination of whether a read request is pending is made after receiving a write request and that the write request is disconnected if there is a delayed read pending. Instead, the cited col. 10 discusses actions to take if a read transaction is received while a delayed transaction is pending. (Kahn, col. 10, lines 31-32)

Moreover, Kahn teaches away from determining whether a delayed read request is pending after receiving a write request and then disconnecting the write if there is a delayed read request pending because Kahn states that "[w]hile a delayed transaction is pending.... [w]rite transactions, however, will be allowed to complete and posted data will be put into the write FIFO". (Kahn, col. 10, lines 31-35; col. 11, lines 12-15)

Thus, the amended claims distinguish over the cited combination and Kahn because the Examiner has not cited any part of Kahn or the other art that teaches or suggests determining whether a delayed read request is pending after receiving a write request and then disconnecting the write if there is a delayed read request. Moreover, the above cited art in fact teaches away from the above claim requirements.

Accordingly, amended claims 1, 15, and 23 are patentable over the cited art because the cited combination of Brown and Kahn does not disclose all the claim requirements.

Claims 4, 5, 10-14, 16, 17, 21, 22, 26, 27, and 32-26 are patentable over the cited art because they depend from one of claims 1, 15, and 23. Applicants amended certain of these claims to recite that the "transaction request" is a "write request", and made other amendments related to adding this requirement. The below discussed dependent claims provide additional grounds of patentability over the cited art.

Claims 5, 17, and 27 depend from claims 1, 15, and 23 and further require determining whether requested data for the delayed read request is available to return, wherein the command to disconnect the device initiating the transaction request is issued after the requested data for the delayed read request is determined to be available to return. The Examiner cited col. 5, lines 4-

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15 of Brown as disclosing the requirements of these claims. (Second Office Action, pg. 3) Applicants traverse.

The cited col. 5 mentions that if the request is a delayed read request for data previously requested, then a determination is made if the read data has returned. If not, a retry request is issued. If the read data has returned, the read data is returned to a host slave.

Although the cited col. 5 discusses returning read data to a delayed read request, nowhere does the cited col. 5 anywhere disclose that a command to disconnect a write request received while a delayed read request is pending is issued after the requested data for the pending delayed read request is available. The cited col. 5 concerns how to return data to a delayed read request, not when to issue a command to disconnect a write request received while a delayed read request is pending as claimed. Further, there is no mention in the cited col. 5 of a write request as claimed.

Accordingly, claims 5, 17, and 27 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not disclosed in the cited Brown and Kahn.

Claims 11, 22, and 33 depend from claims 1, 15, and 23 and further require determining whether a variable indicates a first state or a second state, wherein the state indicated by the variable determines when the target device issues the command to disconnect the device initiating the transaction request while the delayed read request is pending. The Examiner cited col. 4, lines 12-59 as disclosing the additional requirements of these claims. (Second Office Action, pgs. 3-4) Applicants traverse.

The cited col. 4 discusses how to signal a retry if the pending request will take a significant amount of time. When a write request is received, a host slave issues the request to a peripheral master. The peripheral matter accepting the write request causes the host slave to wait for the write request to complete. If the peripheral master completes the write request or if the write returned from a previous retried write, the host slave finishes the write request. If the peripheral master forwards a retry, the host slave sends a back-off command to cause all pending transactions to be cleared. The cited col. 4 further discusses that if a read request is received, the host slave issues the read request to the peripheral master. The host slave waits for the read request to complete. If the peripheral master completes the read request or if the read has

returned from a previous retried read, then the host slave finishes the read request on the host bus.

The cited col. 4 discusses how a host slave and peripheral master process read and write requests. Nowhere does the cited col. 4 anywhere disclose or mention the claim requirement of a variable that determines or controls when the target device issues the command to disconnect the device initiating the write request while the delayed read request is pending. Instead, the cited col. 4 discusses how a peripheral master and a host process read and write request and does not disclose any variable that determines when a command to disconnect is issued for a write request received while a delayed read request is pending.

Accordingly, claims 11, 22, and 33 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not disclosed in the cited Brown.

Claims 12 and 34 depend from claims 11 and 33 and provide further details how the variable of claims 11 and 33 is used. These claims require issuing the command to disconnect the device initiating the transaction request when the device that initiated the delayed read request attempts to reconnect to the target device if the variable indicates the first state and issuing the command to disconnect the device initiating the transaction request after all the requested data for the delayed read request is determined to be available to return if the variable indicates the second state.

The Examiner cited the above discussed col. 4 as disclosing the additional requirements of these claims. (Second Office Action, pg. 4) Applicants traverse.

The cited col. 4 discusses the interaction of a peripheral master and a host slave to process read and write requests. Nowhere does the cited col. 4 disclose or mentions any command to disconnect a write request received while a delayed read request is pending based on the value of the variable. Nowhere is there any disclosure that the command to disconnect the device initiating the write request is issued when the device that initiated the delayed read request attempts to reconnect to the target device if the variable indicates the first state and that the command to disconnect the device initiating the write request is issued after all the requested data for the delayed read request is determined to be available to return if the variable indicates the second state. Nowhere does the cited col. 4 anywhere disclose these type of operations to issue the disconnect command based on the state of a variable.

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Amdt. dated April 13, 2005   Serial No. 10/077,104
Reply to Office action of Jan. 13, 2005   Docket No. SJO920010085US1
                                                                                       Firm No. 0037.0019

2.   Claims 2, 3, 24, and 25 are Patentable Over the Cited Art

        The Examiner rejected claims 2, 3, 24, and 25 as obvious (35 U.S.C. §103) over Brown

in view of Melo. Applicants traverse.

        These claims are patentable over the cited art because they depend from base claims 1

and 23, which are patentable over the cited art for the reasons discussed above and because the

combination of the additional requirements of these claims with the base claims provides further

grounds of distinction.

                                                    Conclusion

        For all the above reasons, Applicant submits that the pending claims 1-36 are patentable

over the art of record. Applicants submit herewith the fee for the claim amendments.

Nonetheless, should any additional fees be required, please charge Deposit Account No.

09-0466.

        The attorney of record invites the Examiner to contact him at (310) 553-7977 if the

Examiner believes such contact would advance the prosecution of the case.

Dated: April 13, 2005   By: _____

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